Statistics 5301
Winter 1998

Exam #2 Data

Our second exam is Friday, Feb 27, in class. This exam is open book and open notes. Analyze the data set below and bring notes on your analysis to class. Answer the exam questions on these data from your notes. You should attach your notes to the exam when you turn it in.

In your analyses, remember to check for assumptions and study interactions. Your analysis should go beyond just the ANOVA and what is significant; it should try to explain what is going on in the data.

An experiment is run to determine the effects of density and competition with ruffe on the weight change in yellow perch. There are two levels of fish density (low and high), and two levels of competition (ruffe absent and ruffe present). Sixteen tanks are arranged in 4 enclosures of 4 tanks each. Within each enclosure, the four tanks are randomly assigned to the four factor/level combinations of density and competition. The response is the change in the weight of perch after 5 weeks. Data can be found below and on the class web page.

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) Col 1 is enclosure
) Col 2 is ruffe (1=absent, 2=present)
) Col 3 is density (1=low, 2=high)
) Col 4 is change in weight in grams.
        1           1           2           0.9
        1           2           2          -1.2
        1           1           1           0
        1           2           1           0
        2           1           2          -0.4
        2           2           2          -1.5
        2           1           1           0.4
        2           2           1          -0.4
        3           1           2          -0.6
        3           2           2          -1.1
        3           1           1           0.9
        3           2           1          -0.9
        4           1           2          -1.2
        4           2           2          -0.7
        4           1           1          -0.4
        4           2           1          -0.9
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Homework problems not to be turned in (but do them anyway!): P15.3(a-c), P15.5, P16.1(c,d), P16.2(a-c), E16.5, P16.7